Maintaining Sustainable Production of Influenza Vaccine to Promote Pandemic Preparedness:
Influenza Vaccine Supply Hubs

Claudia Nannei & Shoshanna Goldin

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World Health Organization

Road towards preparedness

Holistic approach to influenza vaccination and preparedness

Surveillance
Data on strains, prevalence per risk groups, BoD

Evidence based policies
Seasonal influenza vaccination policy

Demand
Vaccine uptake

Supply
Industry motivated to produce vaccines

Preparedness
Industry has capacity for pandemic

Seasonal influenza vaccination and pandemic preparedness

- Regulatory capacity
- Distribution plans and systems (i.e. cold chain, ancillary supplies)
- Monitoring systems
- Health workforce familiarity in administering vaccine
- Public trust in influenza vaccines
- Identified target groups and ability to reach them
- Rapid deployment of supplies in an emergency context

Our best ally for influenza prevention and response

- Influenza vaccines decrease morbidity and mortality for seasonal and pandemic influenza

- Vaccines offer cost effective coverage
- New technologies may offer the potential for improved vaccines
- Currently sub-optimal and limited antivirals… **vaccines remain our best tool**

Global Action Plan for Influenza Vaccine's Goal and Objectives

Concerning situation in 2006: low production capacity & mostly in HICs

10 year strategy to reduce anticipated global shortage & inequitable distribution of vaccines in the event of an influenza pandemic

Goal: Capacity to produce enough vaccine to immunize 70% of the global population with 2 doses = **~10 billion doses**

Objectives:

I. Increase evidence based seasonal vaccine use
II. Expand vaccine production & regulatory capacity
III. Further research & development for better vaccines

Technology Transfer within GAP

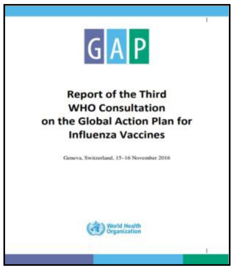
- Main funding provided to WHO by the US HHS
  - Funded also by the Governments of Canada, Japan and the UK.
- Grants and technical assistance provided to 14 LMICs vaccine manufacturers
- Manufacturers agreed to provide 10% of their real time influenza vaccine production capacity to WHO in the event of a pandemic.
- Seed funding complemented by national investment (on average every $1 provided resulted in $17 local investment)
- Combined expected production capacity from these manufacturers will result in >>1.135 billon doses of pandemic vaccine

Increase in Production Capacity

Situation in 2006	Situation Today
500M doses of seasonal vaccine capacity	**1.5B doses** of seasonal vaccine capacity
1.46B doses of potential pandemic vaccine capacity	**6.37B doses** of potential pandemic vaccine production
Production capacity mostly limited to **HICs**	Production capacity expanded to **LMICs** GAP grantees have 8 pandemic vaccines (2 PQ) & 3 seasonal vaccines (1 PQ) licensed in 6 countries (more expected by 2019).

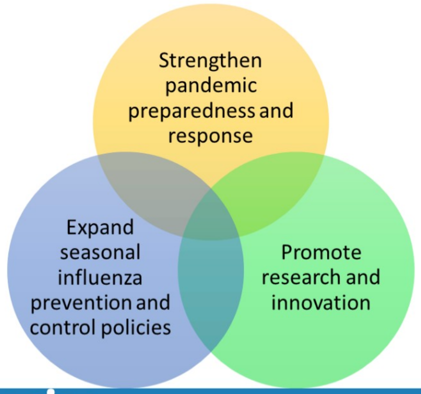
What Now?

- **Final consultation held in November 2016**
- GAP Advisory Group identified the following issues as requiring **continued WHO leadership**:
  - Technical assistance for manufacturers
  - Facilitation of influenza vaccine R&D and vaccination strategies
  - Identify root causes of influenza vaccination hesitancy
  - Generate more evidence on vaccine effectiveness in specific risk groups
  - **Identify innovative ways of addressing global pandemic influenza preparedness**



WHO Global Strategy for Influenza (*draft*)

- Vision: Attainment of the highest possible influenza prevention, control, and preparedness to contribute to health for all people
- Aims at establishing an overarching umbrella for all WHO activities related to influenza preparedness and response
- Will guide global influenza work from 2019- 2030
- Comments received from member states, industry, and beyond



Global production capacity survey

- Previously, WHO monitored global production capacity using data mainly from IFPMA Members.
- Currently, WHO is organizing the next assessment (2019), including DCVMs
- Please, stay tuned!

		Number of seasonal influenza doses distributed by IFPMA members (millions)									
		2006	2007	2008	2009	2010	2011	2012	2013	2014	**2015**
WHO Region	**AFR**	2.0	1.9	1.9	2.6	3.4	3.8	3.9	3.7	3.7	**4.8**
	AMR	173.2	211.6	199.7	201.2	231.7	255.6	252.0	267.7	310.9	**267.7**
	SEAR	1.3	1.6	2.1	4.7	8.6	8.2	7.6	8.7	9.3	**9.2**
	EUR	110.3	111.1	144.2	148.3	108.4	102.8	94.1	98.7	109.7	**106.2**
	EMR	3.3	3.8	4.9	8.8	6.7	6.1	5.2	5.2	6.7	**10.9**
	WPR	63.8	76.9	80.5	83.3	108.6	112.6	111.9	107.9	93.6	**87.1**
Total		**353.9**	**406.9**	**433.3**	**448.9**	**467.4**	**489.1**	**474.7**	**491.9**	**533.9**	**485.9**

Maintaining a Sustainable Supply of Influenza Vaccines in LMICs

Context:

- Seasonal influenza vaccination is increasing across the Middle East, coasts of sub-Saharan Africa, and middle/upper–middle income countries in Asia
- Government identification of target groups and investment in free influenza vaccines for those target groups produces the best coverage and distribution
- Risk communication strategies and cost benefit analyses are needed to sustain and increase demand

Supply Hubs for Influenza Vaccine

WHO convened a pilot Working Group that identified the following priorities to ensure sustainable local production and procurement of seasonal influenza vaccines:

- Harmonization of policies to support **sustainable national procurement**
- Engagement with **key partners for potential procurement** (i.e. Partnership for Influenza Vaccine Introduction, UNICEF, ASEAN Vaccine Security Working Group, etc)
- **Realistic forecast of demand**
- **Prequalification for large scale export**
- Encourage **new pooled procurement models**

Where could DCVMN lead?

- Facilitate development of capacities for strategic business planning aimed at domestic and international markets
- Continue to create opportunities for sharing lessons learned among members (including branding, marketing, reliable distribution networks etc.)
- Engage in international initiatives to contribute to pooled procurement (Unicef, PIVI, ASEAN vaccine security…)

DCVMN and Pandemic Preparedness

- Be the voice of DCVMs in the international discussions on pandemic preparedness for all pathogens, including influenza
- Advocate for sustainable influenza vaccine production capacity in DCVMs (to maintain global pandemic preparedness)

World Health Organization

DCVM's Role

- Unique positioning to be attuned to and serving country and context-specific needs (fingers on the pulse!)
- Responsive to emerging innovations (technology, supply, and financing models)
- Catering for targeted needs (i.e. cholera, typhoid, etc)
- Opportunities for partnerships with non-traditional stakeholders
- Engaging with WHO early and often
- Stay healthy!

Thank You!

Claudia Nannei

nanneic@who.int

Shoshanna Goldin

goldins@who.int